

AMENDMENTS TO THE CLAIMS

Claims 40-55 (canceled)

Claim 56. (previously presented) An integrated circuit, comprising:

a semiconductor substrate;

a gate structure having sidewalls, said gate structure being located over said semiconductor substrate;

a plurality of first diffusion regions implanted with a first dopant, said plurality of first diffusion regions each being adjacent to the sidewalls of said gate structure;

a plurality of second diffusion regions implanted with a second dopant, said plurality of second diffusion regions each being adjacent to the sidewalls of said gate structure;

wherein

each of said first diffusion regions is associated with and located beneath a respective second diffusion region;

each of said first diffusion regions includes a portion extending beneath said gate structure; and

none of said plurality of second diffusion regions include any portion which extends beneath said gate structure.

Claim 57. (previously presented) The integrated circuit of claim 56, wherein said first dopant is a n-type dopant.

Claim 58. (previously presented) The integrated circuit of claim 57, wherein said first dopant is chosen from a group consisting of phosphorous, arsenic, and antimony.

Claim 59. (previously presented) The integrated circuit of claim 56, wherein said first dopant is a p-type dopant.

Claim 60. (previously presented) The integrated circuit of claim 59, wherein said first dopant is chosen from a group consisting of boron, boron bifluoride, and borane.

Claim 61. (previously presented) The integrated circuit of claim 56, wherein the first dopant concentration ranges from 1×10^{12} ions/cm² to 7×10^{12} ions/cm².

Claim 62. (previously presented) The integrated circuit of claim 61, wherein the first dopant concentration is 2×10^{12} ions/cm².

Claim 63. (previously presented) The integrated circuit of claim 56, wherein said first dopant is identical to said second dopant.

Claim 64. (previously presented) The integrated circuit of claim 63, wherein said first dopant and said second dopant are different.

Claim 65. (previously presented) The integrated circuit of claim 63, wherein said first dopant and said second dopant are of different conductivity types.

Claim 66. (previously presented) An semiconductor device comprising:

a substrate having a first surface;

a gate structure formed over said first surface, said gate structure having a thermally reoxidized sidewall, said thermally reoxidized sidewall having an interior surface and an exterior surface; and

a plurality of diffusion regions formed within said substrate, each of said diffusion regions being formed adjacent to the thermally reoxidized sidewall;

wherein

each of said diffusion regions respectively comprise first and second portions respectively having first and second dopant concentrations, which are different and cause each portion to have a graded dopant concentration,

each of said first portions is partially located beneath said interior surface of said thermally reoxidized sidewall; and

each of said second portions is partially located underneath said exterior surface of said thermally reoxidized sidewall; and

none of said second portion is located underneath said interior surface of said thermally reoxidized sidewall.

each of said first portions including a region extending beneath said gate structure; and

none of said second portions having any region which extends beneath said gate structure.

Claim 67. (previously presented) The semiconductor device of claim 66, wherein said first dopant is chosen from a group consisting of: phosphorous, arsenic, and antimony.

Claim 68. (previously presented) The semiconductor device of claim 66, wherein said second dopant is chosen from a group consisting of: phosphorous, arsenic, and antimony.

Claim 69. (previously presented) The semiconductor device of claim 66, wherein said first dopant is chosen from a group consisting of: boron, boron bifluoride, and borane.

Claim 70. (previously presented) The semiconductor device of claim 66, wherein said second dopant is chosen from a group consisting of: boron, boron bifluoride, and borane.

Claims 71-75 (canceled)